

## Achieving Energy Independence via PEP

**The Philippine Energy Plan (PEP) 2005-2014 is geared towards the attainment of 60-percent energy independence through the creation of energy policies that promote a level playing field.**

As stated in the Medium Term Philippine Development Plan (MTPDP) 2004-2010, policy strategies shall be enforced to aid implementation of various energy infrastructure projects. These strategies are (a) expanding the country's oil and gas reserves by 20 percent; (b) strengthening of the Philippine National Oil Company (PNOC); (c) increasing energy-based capacity by 100 percent; (d) expanding the use of natural gas by promoting busses to run on CNG (compressed natural gas); (e) developing fuel blends such as coco-biodiesel and ethanol;

(f) forging strategic alliances; and (g) undertaking research and development programs for renewable energy systems. A paper titled "Demand Situation for Energy in the Philippines 2006-2014" by Energy Undersecretary Guillermo R. Balce shows that the overall energy mix of the country in 2005 totaled to 274.1 million barrels of fuel oil-equivalent (MMBFOE), of which 55.9 percent were indigenous while the remaining was comprised of imported oil and coal.

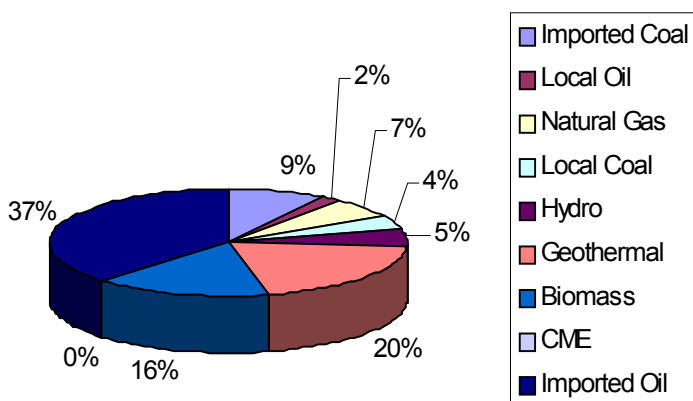
Consequently, the country's demand for energy is estimated on a per sector basis. These sectors are residential, transport, industrial, commercial and agriculture.

### Power Demand Forecasting

The DOE said that overall, the country's peak demand for power energy is seen to grow by an average of 4.1 percent.

Peak demand forecast of distribution utilities is the basis for the formulation of Power Development Plan (PDP), a major component of the PEP. The DOE uses the PDP to establish a simple and participative forecasting methodology to generate accurate and responsive forecasts of electricity demand movements.

**PRIMARY ENERGY MIX, 2005**



Total: 274.07 MMBFOE  
Self-sufficiency Level = 55.9%  
Imported oil = 37.6%

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Power requirements for Luzon increase by an annual average rate of 4.0 percent from 6,443 megawatt (mW) in 2005 to 7,878 mW in 2010 and 9,397 mW in 2014. On the other hand, peak demand for Visayas and Mindanao is seen to grow at a rate of 6.0 percent each.

### **Fuel Demand for Power Generation**

The country's requirements for coal will be the highest with an average of 60 percent followed by natural gas with 23 percent. However, oil share is estimated to decline from 26 percent in 2006 to only 13 percent in 2014 on account of increasing prices in the world market.

The country's fuel requirements for power generation is calculated based on optimal generation mix of the PDP which considers least-cost options in producing power.

The DOE says that on the average, the country's final energy demand will grow by 3.3 percent from the 2005 level of 24.9 million ton-of-oil equivalent (MTOE) to 25.6 MTOE in 2006, 28.9 MTOE in 2010 and 32.9 MTOE in 2014. Likewise, it is projected that petroleum products will remain a dominant fuel to address the high demand of both the transport and industrial sectors.

### **Demand Prospects Per Sector**

#### **Transport Sector**

The transport sector is estimated to account for the largest average share of 34.5 percent of the country's total energy demand. Factors that contribute to this greater demand include the projected population growth, road and rail infrastructure development and other indicators.

Energy consumption of this sector, the DOE said, will post an average growth of 3.5 percent. Gasoline, diesel and fuel oil are seen to remain as the dominant fuel for transport use. Moreover, the use of biofuels is seen to increase by 4.4 percent.

#### **Residential Sector**

The residential sector is seen to record the second largest user of energy accounting for an average share of 28.8 percent to the country's total energy demand.

Demand for LPG will steadily rise by 5.1 percent. The Expanded Rural Electrification Program of the government which aims to energize all of the country's barangays by 2008, account for the major use of electricity in the sector.

#### **Industrial Sector**

Energy requirements for manufacturing, mining and construction are expected to grow at an average rate of 4.3 percent. The industrial sector is seen to register an average share of 25.3 percent to the country's total final energy demand.

The bulk of the sector's total demand will be comprised of petroleum products and will record an increase of 3.9 percent. Also, the electricity requirement of the industries will hike at an average rate of 3.8 percent.

#### **Commercial Sector**

Due to an increasing energy demand in trade, transportation, communication, storage and private services, this sector is projected to post the fastest growth in energy consumption at an average rate of 5.7 percent.

The commercial sector will share an average of 10 percent to the total final energy demand of the country. Electricity will predominantly provide the sector's fuel requirements followed by biomass and petroleum products.

#### **Agriculture Sector**

This sector is considered the least energy-intensive among the sectors because of minimal growth and a meager share of 1.5 percent of the country's total final energy demand.

Energy requirements for agricultural activities will slightly surge by 2.5 percent. Like most of the sectors, petroleum products will be the main fuel of the sector growing at an average rate of 2.5 percent.

### **Challenges**

Given these energy demand forecasts, it is necessary to fulfill the strategies for energy independence through the passing of various legislative bills vis-a-vis the energy sector.

Among these bills are the following: (a) Alternative Fuels Utilization Bill, (b) Natural Gas Bill, (c) Bio-Fuels Act of 2006, (d) Renewable Energy Bill, (5) Liquefied Petroleum Gas Bill.

#### **References:**

Medium-Term Philippine Development Plan 2004-2010

"Demand Situation for Energy in the Philippines 2006-2014," a paper presented by Undersecretary G. R. Balce during the 19th Statistical Research Training Center (SRTC) Annual Conference on 06 October 2006

Philippine Socioeconomic Report 2005

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